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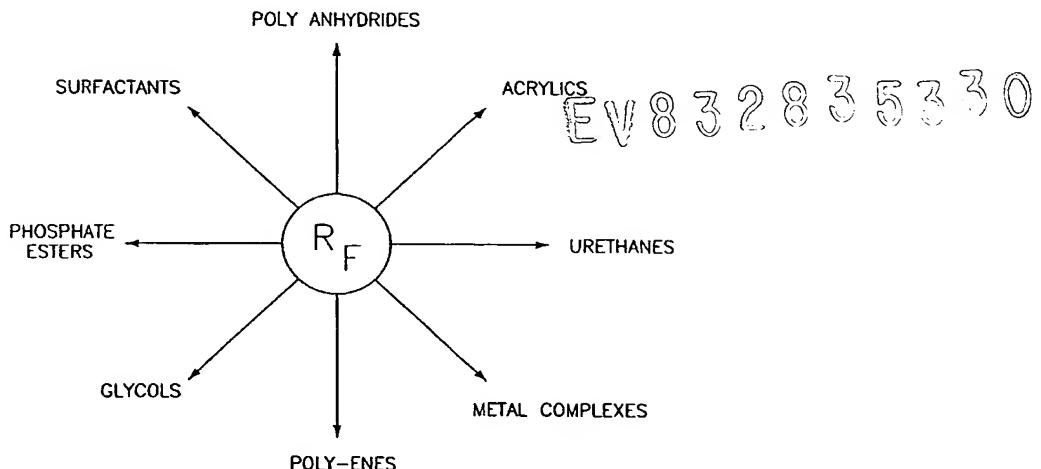
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- (71) Applicant (for all designated States except US): PCBU SERVICES, INC. [US/US]; 300 Delaware Avenue, Suite 1269, Wilmington, DE 19801 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BOGGS, Janet [US/US]; 6925 N. 900 East, Brownsburg, IN 46112 (US). BRANDSTADTER, Stephan, M. [US/US]; 3946 N. Washington Boulevard, Indianapolis, IN 47906 (US). CHIEN, John [US/US]; 3318 Humboldt Street, West Lafayette, IN 47906 (US). SHARMA, Vimal [IN/US]; 2101 Cumberland Avenue, 5104, West Lafayette, IN 47906 (US).
- (47) International Search Report (ISRs): 47906 (US). EDWARDS, E., Bradley [US/US]; 3704 Woodcliff Drive, Lafayette, IN 47905 (US). HEDRICK, Victoria [US/US]; 9262 South 300 E., Brookston, IN 47923 (US). JACKSON, Andrew [US/US]; 3346 Whirl Away Court, West Lafayette, IN 47906 (US). LEMAN, Gregory [US/US]; 3319 Crawford Street, West Lafayette, IN 47906 (US). NORMAN, Edward [US/US]; 942 St Matthews Road, Chester Springs, PA 19425 (US). KAUFMAN, Robert [US/US]; 8129 Stanford Ave., St. Louis, MO 63130 (US).
- (74) Agents: HYTA, Robert, C. et al.; Wells St. John, P.S. 601 West First Ave., Suite 1300, Spokane, WA 99201-3828 (US).
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(54) Title: PRODUCTION PROCESSES AND SYSTEMS, COMPOSITIONS, SURFACTANTS, MONOMER UNITS, METAL COMPLEXES, PHOSPHATE ESTERS, GLYCOLS, AQUEOUS FILM FORMING FOAMS, AND FOAM STABILIZERS



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(57) Abstract: Production processes and systems are provided that include reacting halogenated compounds, dehalogenating compounds, reacting alcohols, reacting olefins and a saturated compounds, reacting reactants having at least two -CF₃ groups with reactants having cyclic groups. R_f compositions such as R_f-intermediates, R_f-surfactants, R_f-monomers, R_f-monomer units, R_f-metal complexes, R_f-phosphate esters, R_f-glycols, R_f-urethanes, and/or R_f-foam stabilizers. The R_f portion can include at least two -CF₃ groups, at least three -CF₃ groups, and/or at least two -CF₃ groups and at least two -CH₂- groups. Detergents, emulsifiers, paints, adhesives, inks, wetting agents, foaming, and defoaming including the R_f-surfactant composition are provided. Acrylics, resins, and polymers are provided that include a R_f-monomer unit. Compositions are provided that include a substrate having a R_f-composition thereover. Aqueous Film Forming Foam ("AFFF") formulations are provided that can include R_f-surfactants and/or R_f-foam stabilizers are provided.



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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
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